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These elements are computed from four observations of Vienna of the 1st, 2d, 4th, and 5th of April. The following are the outstanding deviations from the observations:—

	Obs.—Cal.	
	d.l	*d.λ*
	″	″
April 1	0·0	0·0
2	−4·9	+6·1
4	+8·0	−2·1
5	0·0	0·0

Observations of Comet II. 1854. By T. W. Burr, Esq.

"Although the Society will no doubt be furnished with numerous observations of the new comet, far superior in accuracy to any, I can offer, I am nevertheless induced to forward those I have made, in case they may by chance be useful in filling up a vacancy in the series, and thus aid in completing our knowledge of so interesting a body.

	Green. M.T.	R.A.	N. Decl.	Bar.	Ther.
1854.	h m s	h m s	° ′		
March 30	7 33 25	1 21 36·4	*19 40	30·28	54
	7 44 6	1 21 55·4	...	...	...
31	7 56 10	1 37 25·4	*19 22	30·37	62
	8 2 19	1 37 31·4	...	...	...
April 1	7 29 18	1 51 52·3	*19 12	30·28	60
	7 31 49	1 51 55·3	...	...	...
	7 49 51	1 52 4·3	...	...	...
3	7 2 25	2 20 4·4	17 12	30·52	56
	7 33 46	2 20 22·4	...	...	...
	7 54 28	2 20 36·4	...	...	...
4	7 26 10	2 33 0·3	16 18	30·42	...
	7 32 4	2 33 7·8	...	...	...
	8 12 29	2 33 39·3	...	...	54
5	7 21 15	2 45 28·8	15 17	30·36	58
	7 36 46	2 45 35·8	...	...	...
6	7 28 51	2 57 6·3	14 20	30·38	...
	7 47 20	2 57 19·3	...	...	...
	8 18 29	2 57 35·3	...	...	56
9	7 54 31	3 27 52·4	11 17	30·21	58
	8 24 0	3 28 0·4	...	...	56

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* "These observations in declination are probably incorrect, as on the 2d of April I discovered that the verniers of the circle were loose and shifting. They were then properly fixed and adjusted."

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March 30.	Very fine with naked eye.
31.	Seen with difficulty among clouds.
April 1.	Fine views without telescope.
3, 9.	Not visible to naked eye during observations.

"The observations are not corrected for refraction, which would of course act powerfully on a body so near the horizon, nor for any other cause of alteration in position except instrumental errors. I have therefore added the atmospheric pressure and temperature for each evening. The barometer is about 85 feet above Trinity high-water mark. Approximate latitude and longitude, $51^{\circ}\ 33'\ 45''$ N., and $23^{s}\cdot 8$ W.

"The instrument used was the equatoreal mentioned in a previous notice of mine respecting *Saturn's* rings. It is by Ross, of 4 feet focal length, and $3\frac{3}{8}$ inches aperture, and has a Fraunhofer mounting. It reads only to 4^{s} in right ascension, and single minutes in declination, and the observations may therefore vary within those limits, though sometimes careful estimations of smaller distances have been attempted. The clock error was determined by several transits each evening prior to and during the observations on the comet.

"Having no catalogue at hand but the *Nautical Almanac*, and the daylight being generally so strong as to prevent small stars in the neighbourhood being visible, I have been compelled to use *α Arietis* during the first three days' observations, and the same star and *η Tauri* in later ones, as stars of comparison.

"On the 3d April the comet was found in the telescope at $6^{h}\ 55^{m}$ G.M.T., when the sun had only set about 20 minutes, and the light was therefore very strong. The planet *Saturn*, which was looked at for comparison, was distinguishable, with about the same facility as the comet, both being faint objects, while *Aldebaran* was very bright and easily seen.

"The nucleus of the comet was throughout of a golden tint, apparently $10''$ or $12''$ in diameter, and enveloped in the coma which extended round it on the side nearest the sun, while the tail stretched in the opposite direction, and was continued with nearly parallel sides and of a brush-like character of rays to some distance. It has lately become somewhat more divergent in appearance, but has not to my eye assumed a curvature at all. On the 30th March the tail was estimated by the unassisted eye to be about 2° in length, and upon measuring it by means of the declination circle it was found to be quite $1^{\circ}\frac{1}{2}$. On the 1st April only 1° could be thus seen, but the evening was lighter and the moonlight stronger. The same causes have conspired still further to diminish the comet's brilliancy and the length of the tail, and on the 4th instant only $15'$ could be traced; but besides these causes of apparent diminution, the intrinsic brightness of the nucleus is really much impaired, as is shown by comparison with stars which it formerly equalled or surpassed in lustre. This was well proved on the 9th April, when *α Arietis* was visible some time before the

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comet could be discovered, although the star was in much the more unfavourable position with regard to the twilight."

Extract of a Letter from J. C. Adams, Esq., to the Editor.

"Probably you will have plenty of elements of the comet which is now starring it, nevertheless I may mention the following, which I deduced from Professor Challis's observations on March 30, April 1, 3. A comparison of these elements with an observation on April 7, gave an error of only 10″ in longitude, and nothing in latitude, so that they are probably not far from the truth.

Perihelion Passage, March 24·01221, G.M.T.

	° ′ ″
Longitude of Perihelion	213 51 32
— Ascending Node	315 29 52
Inclination	82 34 28
Log Perihelion Distance	9·4426170

Motion retrograde.

Note on the Zodiacal Light, the Companion of Procyon, and Sirius. By the Rev. T. W. Webb.

"Since my former communication on the subject of the zodiacal light, I have noticed two instances of it which offered appearances somewhat unusual.

"1853, Dec. 30. As soon as twilight had disappeared, the zodiacal light was faintly but very evidently perceived. Had it been more distinct, I thought it would have presented a very curious appearance; but its want of brightness rendered me less certain than I could have wished. Its general character, however, seemed to be that of two or three slender tapering streams, forming altogether but a narrow cone, much fainter than the galaxy, though in a beautifully clear evening, and extending towards, if not to, the stars in *Aries*.

"1854, Feb. 25. About $8^h\ 15^m$ there was a fine bright zodiacal light, passing between the stars of *Aries*, and extending towards, or perhaps reaching as far as *Saturn*; the termination, however, was very uncertain. It was very bright as compared with the galaxy, and did not appear double or divided into streams. I once or twice fancied that the south edge was best defined, but could not satisfy myself of the fact; I had, however, a stronger suspicion that the whole beam of light was a little concave towards the north pole.

"I regret to find that the observation of the companion of *Procyon*, which appeared in vol. xiii., No. 9, of the *Monthly Notices*, is of no value. I have since remarked that the principal